

REMARKS

Reconsideration and allowance of this application are respectfully requested in light of the above amendments and the following remarks.

Claims 1-9 have been canceled in favor of new claims 10-18. Support for the subject matter of the new claims is provided at least in the original claims and paragraphs [0060]-[0062], [0064], and [0082]-[0084] of the specification. New claims 10-18 have been drafted to avoid the issues underlying the objection applied to claim 1 and the 35 USC 112, second paragraph, rejections applied to claims 1 and 8.

Claims 1-9 were rejected, under 35 USC §102(b), as being anticipated by Frodigh et al. (US 5,726,978). To the extent these rejections may be deemed applicable to new claims 10-18, the Applicants respectfully traverse based on the points set forth below.

Claim 10 defines a radio communication apparatus that selects subcarriers of higher reception quality and reports a channel quality indicator (CQI) for the selected subcarriers and information indicating the selected subcarriers to a communicating party. Using the communicated information, the communicating party may assign the subcarriers of higher reception quality to the radio communication apparatus and carry out modulation and coding scheme (MCS) control of the assigned subcarriers based on the reported CQI. The claimed subject matter provides an advantage of improving the throughput of a communication system (see specification page 7, lines 20-23).

Frodigh discloses: (1) choosing a subset of M subcarriers from a larger set of N subcarriers available for communication on a link, as communication takes place on the link (see Frodigh col. 10, lines 19-22), (2) periodically performing signal quality (C/I) measurements on

the subcarriers of the subset of M subcarriers and interference (I) measurements on the subcarriers of the group of N subcarriers (col. 10, lines 61-62, and col. 11, lines 3-5), and (3) reconfiguring the subset of M subcarriers using the C/I and I measurements (col. 12, lines 17-21).

However, Frodigh does not disclose or suggest, if M subcarriers used in a mobile station are changed, carrying out MCS control of the changed M subcarriers. Therefore, Frodigh only discloses switching M subcarriers (subbands).

By contrast with this, the CQI according to reception quality of the higher selected subcarriers and the reported CQI represent subcarriers that are highly likely to be assigned by the communicating party, so that the invention according to independent claim 10 is able to carry out MCS control of the subcarriers assigned by the communicating party. That is, the claimed invention may control the transmission rate by MCS control together with switching of subcarriers. By this means, if scheduling is carried out instantaneously, a radio communication apparatus of a good channel condition is scheduled. In this way, if the channel condition is good, a lot of data bits can be transmitted in a short time by a high MCS, so that it is possible to improve throughput. Further, by carrying out transmission by the MCS according to a channel condition, stable error rates can be obtained, so that it is possible to make communication stable.

In this way, the invention according to independent claim 10 differs from the invention disclosed by Frodigh both in configuration and effect, and so these inventions are completely different.

Accordingly, the Applicants submit that Frodigh does not anticipate the subject matter of new claim 10. Independent claims 17 and 18 similarly recite the above-mentioned subject matter

of apparatus claim 10, although claim 17 does so with respect to a method. Therefore, allowance of claims 10, 17, and 18 and all claims dependent therefrom is warranted.

In view of the above, it is submitted that this application is in condition for allowance, and a notice to that effect is respectfully solicited.

If any issues remain which may best be resolved through a telephone communication, the Examiner is requested to telephone the undersigned at the local Washington, D.C. telephone number listed below.

Respectfully submitted,

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